

WHAT IS CLAIMED IS:

1. A control element for a nuclear reactor comprising:

a plurality of absorber rods (7) each absorber rod (7) comprising at least an inner absorber enclosure (10), an outer absorber enclosure (13) and a first middle absorber enclosure (11), wherein the absorber enclosures are fitted and nested into each other and concentric in their relationship;

a predetermined spacing between each of the absorber enclosures surrounding and adjacent to one another; and

an absorber (8) contained only within the inner absorber enclosure (10);

wherein, in the event of expansion of the absorber, a respective absorber enclosure is removable from a starting position and a mechanical resistance is formed for compressing and containing the absorber.

2. The control element according to claim 1, wherein the outer absorber enclosure is at least partly

around the middle absorber enclosure which is around the inner absorber enclosure.

3. The control element according to claim 1, wherein the outer absorber enclosure is completely surrounding and enclosing the inner absorber enclosure.

4. The control element according to claim 1, wherein there are four absorber enclosures (10, 11, 12, 13), comprising said inner absorber enclosure (10) and said outer absorber enclosure (13) spaced from said inner absorber enclosure and said first middle absorber enclosure (11) positioned between and spaced from said inner and outer absorber enclosure; and

a second middle absorber enclosure (12) positioned between and spaced from said first middle absorber enclosure and said outer absorber enclosure.

5. The control element according to claim 1, wherein dimensions of the inner absorber enclosure are selected in such a way that the inner absorber enclosure receives preset sintered absorber tablets.

6. The control element according to claim 1, wherein B₄C is used as absorber.

7. The control element according to claim 1, wherein the absorber has less than 70% of a theoretical density.

8. The control element according to claim 1, further comprising a boiling water reactor, and said control element (1) is a component of said boiling water reactor.

9. The control element according to claim 1, further comprising a pressurized water reactor, and said control element (1) is a component of said pressurized water reactor.